

## Detailed Data Tables: Women

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### Recent changes to the presentation of Massachusetts HIV/AIDS surveillance data

Effective January 1, 2011, the Massachusetts Department of Public Health (MDPH), Bureau of Infectious Disease and Laboratory Sciences, HIV/AIDS fact sheets, epidemiologic reports and other HIV data presentations have been updated to remove all HIV/AIDS cases for all years presented that were first diagnosed in another state before being reported in Massachusetts. As of January 1, 2016, this resulted in the removal of 4,913 HIV/AIDS cases, of which 1,099 have died and 3,814 were living. These persons living with HIV infection may still continue to reside and receive care in the Commonwealth. The total number of persons living with HIV infection, regardless of location at diagnosis, is the basis for MDPH service planning. Please note that previous HIV/AIDS fact sheets, data reports and presentations included cases that may have been first diagnosed in another state.

Also effective January 1, 2011, the MDPH HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to eliminate the presumed heterosexual risk category for men; those cases have been reassigned to the no identified risk (NIR) category. The presumed heterosexual risk category was used with the intention of identifying HIV risk for women when sex with men is the only reported risk factor, there is no evidence of current or past injection drug use (IDU), and behavioral risk and HIV status information about male sexual partners are unknown. The rationale for the application of the presumed heterosexual risk category to women only has been addressed in the MDPH Office of HIV/AIDS report "Intersecting Risks: HIV Infection among Heterosexual Women and Men in Massachusetts." (2010) [http://www.mass.gov/Eeohhs2/docs/dph/aids/intersecting\\_risks.pdf](http://www.mass.gov/Eeohhs2/docs/dph/aids/intersecting_risks.pdf). The CDC reports men diagnosed with HIV infection who report sex with women as their only risk factor, without corresponding partner risk or HIV status information, in the NIR category. This revision to report presumed heterosexual male HIV/AIDS cases as NIR will bring Massachusetts HIV/AIDS case reporting for men in alignment with CDC standards. The MDPH will maintain presumed heterosexual and heterosexual risk categories for women.

**Table 1. Number and percentage distribution of people diagnosed with HIV infection by sex at birth: Massachusetts<sup>1</sup>, 2012–2014<sup>2</sup>**

<b>Sex at birth:</b>	<b>N</b>	<b>%</b>
Men	1,510	74%
Women	517	26%
<b>Total</b>	<b>2,027</b>	<b>100%</b>

<sup>1</sup> Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases for all years presented that were first diagnosed in another state before being reported in Massachusetts.

<sup>2</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999.

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding); Data are current as of 3/1/16 and may be subject to change

**Table 2. Number and percentage distribution of people living with HIV infection on December 31, 2015 by sex at birth: Massachusetts<sup>1</sup>**

<b>Sex at birth:</b>	<b>N</b>	<b>%</b>
Men	14,439	71%
Women	5,833	29%
<b>Total</b>	<b>20,272</b>	<b>100%</b>

<sup>1</sup> Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases for all years presented that were first diagnosed in another state before being reported in Massachusetts.

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding); Data are current as of 3/1/16 and may be subject to change

**Table 3. Number and percentage distribution of people diagnosed with HIV infection by sex at birth and year of diagnosis: Massachusetts<sup>1</sup> 2005–2014<sup>2</sup>**

	Men		Women		Total
	N	%	N	%	
2005	663	73%	250	27%	913
2006	595	72%	234	28%	829
2007	544	71%	218	29%	762
2008	544	73%	202	27%	746
2009	545	76%	169	24%	714
2010	502	71%	208	29%	710
2011	497	72%	195	28%	692
2012	525	73%	194	27%	719
2013	510	75%	169	25%	679
2014	475	76%	154	24%	629

<sup>1</sup> Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases for all years presented that were first diagnosed in another state before being reported in Massachusetts.

<sup>2</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available 10 year period after the implementation of HIV infection reporting in 1999.

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data are current as of 3/1/16 and may be subject to change

**Table 4. Number and percentage distribution of people diagnosed with HIV infection by sex at birth and exposure mode: Massachusetts<sup>1</sup>, 2012–2014<sup>2</sup>**

Exposure mode:	Men		Women		State Total	
	N	%	N	%	N	%
Male-to-male sex (MSM)	920	61%	N/A	N/A	920	45%
Injection drug use (IDU)	62	4%	43	8%	105	5%
MSM/IDU	51	3%	N/A	N/A	51	3%
Heterosexual sex	56	4%	95	18%	151	7%
Other	8	1%	3	1%	11	1%
Total undetermined/other	413	27%	376	73%	789	39%
- Pres. HTSX <sup>3</sup>	N/A	N/A	276	53%	276	14%
- Undetermined <sup>4</sup>	413	27%	100	19%	513	25%
<b>Total</b>	<b>1,510</b>	<b>100%</b>	<b>517</b>	<b>100%</b>	<b>2,027</b>	<b>100%</b>

<sup>1</sup> Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases for all years presented that were first diagnosed in another state before being reported in Massachusetts.

<sup>2</sup> Reflects year of HIV diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999.

<sup>3</sup> Includes woman having sex with a man of unknown HIV status or risk. This category is limited to women.

<sup>4</sup> Includes man having sex with a woman of unknown HIV status or risk, those still being followed up for risk information, those who have died with no determined risk, and those lost to follow-up.

Pres. HTSX = Presumed Heterosexual Sex; N/A = Not Applicable

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data are current as of 3/1/16 and may be subject to change

**Table 5. Number and percentage distribution of people living with HIV infection on December 31, 2015 by sex at birth and exposure mode: Massachusetts<sup>1</sup>**

Exposure mode:	Men		Women	
	N	%	N	%
Male-to-male sex (MSM)	7,683	53%	N/A	N/A
Injection drug use (IDU)	2,330	16%	1,230	21%
MSM/IDU	701	5%	N/A	N/A
Heterosexual sex	828	6%	1,991	34%
Other	230	2%	183	3%
Total undetermined/other	2,667	18%	2,429	42%
• Presumed heterosexual sex <sup>2</sup>	N/A	N/A	1,894	32%
• Undetermined <sup>3</sup>	2,667	18%	535	9%
<b>Total</b>	<b>14,439</b>	<b>100%</b>	<b>5,833</b>	<b>100%</b>

<sup>1</sup> Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases for all years presented that were first diagnosed in another state before being reported in Massachusetts.

<sup>2</sup> Includes woman having sex with a man of unknown HIV status or risk. This category is limited to women.

<sup>3</sup> Includes man having sex with a woman of unknown HIV status or risk, those still being followed up for risk information, those who have died with no determined risk, and those lost to follow-up.

N/A=Not Applicable

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data are current as of 3/1/16 and may be subject to change

**Table 6. Number and percentage distribution of women diagnosed with HIV infection by race/ethnicity<sup>1</sup> and exposure mode: Massachusetts<sup>2</sup>, 2012–2014<sup>3</sup>**

Exposure mode:	White (NH)		Black (NH)		Hispanic/Latina	
	N	%	N	%	N	%
Injection drug use	26	27%	3	1%	14	10%
Heterosexual sex	18	19%	41	15%	29	21%
Total undetermined/other	51	53%	223	83%	92	68%
• Presumed heterosexual sex <sup>4</sup>	29	30%	177	66%	63	47%
• Undetermined <sup>5</sup>	22	23%	46	17%	29	21%
<b>Total<sup>6</sup></b>	<b>96</b>	<b>100%</b>	<b>269</b>	<b>100%</b>	<b>135</b>	<b>100%</b>

<sup>1</sup> Data for Asian/Pacific Islander, American Indian/Alaska Native and Other/Unknown race/ethnicity are not presented due to small numbers.

<sup>2</sup> Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases for all years presented that were first diagnosed in another state before being reported in Massachusetts.

<sup>3</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999.

<sup>4</sup> Includes woman having sex with a man of unknown HIV status or risk. This category is limited to women.

<sup>5</sup> Includes those still being followed up for risk information, those who have died with no determined risk and those lost to follow-up.

<sup>6</sup> Totals include pediatric and blood/blood products exposure modes.

(NH) = Non-Hispanic

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data are current as of 3/1/16 and may be subject to change

**Table 7. Number and percentage distribution of women living with HIV infection on December 31, 2015 by race/ethnicity<sup>1</sup> and exposure mode: Massachusetts<sup>2</sup>**

Exposure mode:	White (NH)		Black (NH)		Hispanic/ Latina		API	
	N	%	N	%	N	%	N	%
Injection drug use	573	41%	274	10%	369	23%	-- <sup>5</sup>	-- <sup>5</sup>
Heterosexual sex	425	30%	857	32%	658	42%	30	35%
Other	49	3%	76	3%	52	3%	-- <sup>5</sup>	-- <sup>5</sup>
Total undetermined/other	367	26%	1,488	55%	506	32%	48	56%
• Pres. HTSX <sup>3</sup>	258	18%	1,209	45%	384	24%	29	34%
• Undetermined <sup>4</sup>	109	8%	279	10%	122	8%	19	22%
<b>Total<sup>6</sup></b>	<b>1,414</b>	<b>100%</b>	<b>2,695</b>	<b>100%</b>	<b>1,585</b>	<b>100%</b>	<b>86</b>	<b>100%</b>

<sup>1</sup> Data for American Indian/Alaska Native and Other/Unknown race/ethnicity are not presented due to small numbers.

<sup>2</sup> Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases for all years presented that were first diagnosed in another state before being reported in Massachusetts.

<sup>3</sup> Includes woman having sex with a man of unknown HIV status or risk. This category is limited to women.

<sup>4</sup> Includes those still being followed up for risk information, those who have died with no determined risk and those lost to follow-up, and those with confirmed occupational risk.

<sup>5</sup> Values less than five are suppressed for populations less than 50,000 or for populations of unknown size. Additional values may be suppressed to prevent back calculation.

<sup>6</sup> Total includes numbers suppressed for the assurance of confidentiality

(NH) = Non-Hispanic, API = Asian/Pacific Islander, Pres. HTSX = Presumed Heterosexual Sex

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data are current as of 3/1/16 and may be subject to change

**Table 8. Number and percentage distribution of people diagnosed with HIV infection by sex at birth and race/ethnicity: Massachusetts<sup>1</sup>, 2012–2014<sup>2</sup>**

Race/Ethnicity:	Men		Women	
	N	%	N	%
White, non-Hispanic	649	43%	96	19%
Black, non-Hispanic	344	23%	269	52%
Hispanic/Latino	445	29%	135	26%
Asian/Pacific Islander	59	4%	13	3%
Other/Unknown	13	1%	4	1%
<b>Total</b>	<b>1,510</b>	<b>100%</b>	<b>517</b>	<b>100%</b>

<sup>1</sup> Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases for all years presented that were first diagnosed in another state before being reported in Massachusetts.

<sup>2</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding); Data are current as of 3/1/16 and may be subject to change

**Table 9. Number and percentage distribution of people living with HIV infection on December 31, 2015 by sex at birth and race/ethnicity: Massachusetts<sup>1</sup>**

Race/Ethnicity:	Men		Women	
	N	%	N	%
White, non-Hispanic	7,195	50%	1,414	24%
Black, non-Hispanic	3,388	23%	2,695	46%
Hispanic/Latino	3,444	24%	1,585	27%
Asian/Pacific Islander	313	2%	86	1%
Other/Unknown	99	1%	53	1%
<b>Total</b>	<b>14,439</b>	<b>100%</b>	<b>5,833</b>	<b>100%</b>

<sup>1</sup> Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases for all years presented that were first diagnosed in another state before being reported in Massachusetts.

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data are current as of 3/1/16 and may be subject to change



## Explanation of rates

A “rate” of a disease per 100,000 population is a useful way to compare groups that have substantially different population sizes. For example, the number of people living with HIV infection on December 31, 2015 who are Hispanic/Latino, is 5,029 whereas the number of people living with HIV infection who are white (non-Hispanic) is 8,609. Although the number of people living with HIV infection who are Hispanic/Latino in Massachusetts is smaller than the number of people living with HIV infection who are white (non-Hispanic), there are fewer people of Hispanic/Latino ethnicity living in Massachusetts than white (non-Hispanic) individuals. Hispanic/Latino individuals represent 10% of the Massachusetts population compared to white (non-Hispanic) individuals who represent 78% of the population<sup>1</sup>. If HIV/AIDS had the same impact on the Hispanic/Latino population of the state as on the white (non-Hispanic), then there should be eight times as many cases in white (non-Hispanic) individuals, but there are less than twice as many. By calculating a rate, it is evident that the number of people living with HIV infection for every 100,000 Hispanic/Latino individuals in Massachusetts is much higher than the rate for every 100,000 white (non-Hispanic) individuals. This is calculated by dividing the number of people living with HIV infection by the population of interest (the total number of Hispanic/Latino individuals in Massachusetts, for example) and multiplying by 100,000. (See example 1.A below).

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<sup>1</sup> The denominators for prevalence calculations are based on year 2010 population estimates from the MDPH Bureau of Health Information, Statistics, Research and Evaluation

**Example 1.A: Calculation of crude HIV/AIDS prevalence rate for white (non-Hispanic) individuals, Massachusetts (167.7 per 100,000)**

$$\begin{aligned}\text{Crude HIV/AIDS prevalence rate for white (non-Hispanic) individuals} &= (\text{number of white (non-Hispanic) individuals living with HIV infection} \div \text{population size of white (non-Hispanic) individuals}) \times 100,000 \\ &= (8,609 / 5,132,633) \times 100,000 \\ &= (.0016773) \times 100,000 \\ &= \mathbf{167.7}\end{aligned}$$

However, sometimes, in addition to the population size being different, the age composition of the populations is different. In Massachusetts, black (non-Hispanic) and Hispanic/Latino populations are generally younger than the white (non-Hispanic) population. The median age of black (non-Hispanic) people (29.7 years) and Hispanic/Latino people (24.5 years) is younger than that of white (non-Hispanic) people (38.8 years). Therefore, an appropriate comparison requires “age-adjustment” of the HIV/AIDS prevalence rate to get a true comparison of the impact of the disease across racial/ethnic groups without an effect from the differences in age composition. Age-adjustment of rates minimizes the distortion created by differences in age composition.

Age-adjusted rates are calculated by multiplying the age-specific rates for a given population by the age distribution of a standard population. The weighted age-specific rates are then added to produce the adjusted rate for all ages combined. (See example 1.B below).

**Example 1.B: Calculation of age-adjusted HIV/AIDS prevalence rate for white (non-Hispanic) individuals, Massachusetts (140.3 per 100,000)**

A	B	C	D	E
Age group (in years)	# of prevalent HIV/AIDS cases	Population (2010)	2000 US standard population weight	Age-adjusted rate ((B÷C×D)×100,000))
<1	0	48,010	0.013818	0.00
1-4	0	200,452	0.055317	0.00
5-14	5	571,967	0.145565	0.13
15-24	73	677,899	0.138646	1.49
25-34	536	603,245	0.135573	12.05
35-44	1042	676,064	0.162613	25.06
45-54	3100	841,315	0.134834	49.68
55-64	2884	697,852	0.087247	36.06
65-74	819	403,518	0.066037	13.40
75-84	138	275,380	0.044842	2.25
85+ years	12	136,931	0.015508	0.14
<b>Total</b>	<b>8,609</b>	<b>5,132,633</b>	<b>1.000000</b>	<b>140.3</b>

To see the effect of age-distribution on prevalence rates see Tables 10 and 11 below for a comparison of crude and age-adjusted rates by race/ethnicity.

**Table 10. Crude and age-adjusted rates of diagnosis of HIV infection per 100,000 population<sup>1</sup> by race/ethnicity and sex at birth: Average annual rate, Massachusetts<sup>2</sup>, 2012–2014<sup>3</sup>**

<b>State total (N=2,027):</b>	<b>Crude rate per 100,000</b>	<b>Age-adjusted rate per 100,000</b>
White (non-Hispanic)	4.8	4.8
Black (non-Hispanic)	49.2	48.5
Hispanic/Latino	30.8	31.3
Asian/Pacific Islander	6.7	5.7
<b>Total rate</b>	<b>10.3</b>	<b>10.3</b>
<b>Men (N=1,510):</b>	<b>Crude rate per 100,000</b>	<b>Age-adjusted rate per 100,000</b>
White (non-Hispanic) Men	8.7	8.6
Black (non-Hispanic) Men	57.2	57.3
Hispanic/Latino Men	48.1	48.5
Asian/Pacific Islander Men	11.4	9.7
<b>Total rate among men</b>	<b>15.9</b>	<b>15.6</b>
<b>Women (N=517):</b>	<b>Crude rate per 100,000</b>	<b>Age-adjusted rate per 100,000</b>
White (non-Hispanic) Women	1.2	1.2
Black (non-Hispanic) Women	41.8	40.9
Hispanic/Latina Women	14.1	15.2
Asian/Pacific Islander Women	2.3	2.1
<b>Total rate among women</b>	<b>5.1</b>	<b>5.1</b>

<sup>1</sup> The denominators for rate calculations are from the MDPH Massachusetts Race Allocated Census 2010 Estimates (MRACE 2010), Massachusetts Department of Public Health, Bureau of Health Information, Statistics, Research, and Evaluation

<sup>2</sup> Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases for all years presented that were first diagnosed in another state before being reported in Massachusetts.

<sup>3</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999. Data Source: MDPH HIV/AIDS Surveillance Program; Data are current as of 3/1/16 and may be subject to change

**Table 11. Crude and age-adjusted HIV/AIDS prevalence rate per 100,000 population<sup>1</sup> on December 31, 2015 by race/ethnicity and sex at birth: Massachusetts<sup>2</sup>**

<b>State Total (N=20,272):</b>	<b>Crude rate per 100,000</b>	<b>Age-adjusted rate per 100,000</b>
White, non-Hispanic	167.7	140.3
Black, non-Hispanic	1,464.4	1,512.2
Hispanic/Latino	801.2	1,059.4
Asian/Pacific Islander	110.9	114.0
<b>Total prevalence</b>	<b>309.6</b>	<b>278.4</b>
<b>Men (N=14,439):</b>	<b>Crude rate per 100,000</b>	<b>Age-adjusted rate per 100,000</b>
White, non-Hispanic	290.2	241.3
Black, non-Hispanic	1,688.6	1,811.2
Hispanic/Latino	1,117.8	1,562.5
Asian/Pacific Islander	181.9	187.3
<b>Total prevalence among men</b>	<b>456.0</b>	<b>408.5</b>
<b>Women (N=5,833):</b>	<b>Crude rate per 100,000</b>	<b>Age-adjusted rate per 100,000</b>
White, non-Hispanic	53.3	46.1
Black, non-Hispanic	1,254.9	1,268.7
Hispanic/Latina	496.0	631.5
Asian/Pacific Islander	45.8	47.4
<b>Total prevalence among women</b>	<b>172.5</b>	<b>158.3</b>

<sup>1</sup> The denominators for rate calculations are from the MDPH Massachusetts Race Allocated Census 2010 Estimates (MRACE 2010), Massachusetts Department of Public Health, Bureau of Health Information, Statistics, Research, and Evaluation

<sup>2</sup> Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases for all years presented that were first diagnosed in another state before being reported in Massachusetts.

Data Source: MDPH HIV/AIDS Surveillance Program; Data are current as of 3/1/16 and may be subject to change

**Table 12. Number and percentage distribution of people diagnosed with HIV infection by sex at birth and place of birth: Massachusetts<sup>1</sup>, 2012–2014<sup>2</sup>**

Race/Ethnicity:	Men		Women	
	N	%	N	%
United States (US)	957	63%	223	43%
Puerto Rico/US Dependency <sup>3</sup>	93	6%	41	8%
Non-US	460	30%	253	49%
<b>Total</b>	<b>1,510</b>	<b>100%</b>	<b>517</b>	<b>100%</b>

<sup>1</sup> Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases for all years presented that were first diagnosed in another state before being reported in Massachusetts.

<sup>2</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999.

<sup>3</sup> All people diagnosed with HIV infection from 2012–2014 who were born in a US dependency were born in Puerto Rico. Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data are current as of 3/1/16 and may be subject to change

**Table 13. Number and percentage distribution of people living with HIV infection on December 31, 2015 by sex at birth and place of birth: Massachusetts<sup>1</sup>**

Place of Birth:	Men		Women	
	N	%	N	%
United States (US)	10,038	70%	3,005	52%
Puerto Rico/US Dependency <sup>2</sup>	1,307	9%	676	12%
Non-US	3,094	21%	2,152	37%
<b>Total</b>	<b>14,439</b>	<b>100%</b>	<b>5,833</b>	<b>100%</b>

<sup>1</sup> Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases for all years presented that were first diagnosed in another state before being reported in Massachusetts.

<sup>2</sup> Ninety-eight percent of people living with HIV infection in MA who were born in a US dependency were born in Puerto Rico, 2% were born in US minor outlying areas <1% were born in the US Virgin Islands, and <1% were born in Guam.

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data are current as of 3/1/16 and may be subject to change

**Table 14. Number and percentage distribution of women diagnosed with HIV infection by race/ethnicity<sup>1</sup> and place of birth: Massachusetts<sup>2</sup>, 2012–2014<sup>3</sup>**

	US		Puerto Rico/ US Dependency <sup>4</sup>		Non-US	
Race/Ethnicity:	N	%	N	%	N	%
White (NH)	86	90%	-- <sup>6</sup>	-- <sup>6</sup>	8	8%
Black (NH)	84	31%	-- <sup>6</sup>	-- <sup>6</sup>	185	69%
Hispanic/Latino	48	36%	39	29%	48	36%
<b>All Women<sup>5</sup></b>	<b>223</b>	<b>43%</b>	<b>41</b>	<b>8%</b>	<b>253</b>	<b>49%</b>

<sup>1</sup> Data for Asian/Pacific Islander, American Indian/Alaska Native and Other/Unknown race/ethnicity are not presented due to small numbers.

<sup>2</sup> Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases for all years presented that were first diagnosed in another state before being reported in Massachusetts.

<sup>3</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999.

<sup>4</sup> All people diagnosed with HIV infection from 2012–2014 who were born in a US dependency were born in Puerto Rico.

<sup>5</sup> Totals include people of American Indian/Alaska Native and Other/Unknown race/ethnicity.

<sup>6</sup> Values less than five are suppressed for populations less than 50,000 or for populations of unknown size. Additional values may be suppressed to prevent back calculation.

(NH) = Non-Hispanic

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data are current as of 3/1/16 and may be subject to change

**Table 15. Number and percentage distribution of women diagnosed with HIV infection by place of birth and year of diagnosis: Massachusetts<sup>1</sup>, 2005–2014<sup>2</sup>**

	US		Puerto Rico/ US Dependency <sup>3</sup>		Non-US		Total
	N	%	N	%	N	%	
2005	113	45%	25	10%	112	45%	250
2006	113	48%	19	8%	102	44%	234
2007	105	48%	19	9%	94	43%	218
2008	79	39%	24	12%	99	49%	202
2009	74	44%	19	11%	76	45%	169
2010	79	38%	11	5%	118	57%	208
2011	92	47%	9	5%	94	48%	195
2012	76	39%	18	9%	100	52%	194
2013	77	46%	12	7%	80	47%	169
2014	70	45%	11	7%	73	47%	154

<sup>1</sup> Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases for all years presented that were first diagnosed in another state before being reported in Massachusetts.

<sup>2</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available 10 year period after the implementation of HIV infection reporting in 1999.

<sup>3</sup> Ninety-nine percent of people diagnosed with HIV infection from 2005–2014 who were born in a US dependency were born in Puerto Rico, 1% were born in US minor outlying areas <1% were born in the US Virgin Islands, and <1% were born in Guam. Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data are current as of 3/1/16 and may be subject to change



**Table 16. Number and percentage distribution of people diagnosed with HIV infection by sex at birth and age at HIV diagnosis: Massachusetts<sup>1</sup>, 2012–2014<sup>2</sup>**

<b>Age (years):</b>	<b>Men</b>		<b>Women</b>	
	<b>N</b>	<b>%</b>	<b>N</b>	<b>%</b>
Under 13	4	<1%	3	1%
13 to 19	34	2%	21	4%
20 to 24	198	13%	41	8%
25 to 29	236	16%	55	11%
30 to 34	194	13%	78	15%
35 to 39	140	9%	58	11%
40 to 44	173	11%	54	10%
45 to 49	225	15%	70	14%
50 to 54	148	10%	54	10%
55 to 59	83	5%	41	8%
60+	75	5%	42	8%
<b>Total</b>	<b>1,510</b>	<b>100%</b>	<b>517</b>	<b>100%</b>

<sup>1</sup> Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases for all years presented that were first diagnosed in another state before being reported in Massachusetts.

<sup>2</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999.

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding); Data are current as of 3/1/16 and may be subject to change

**Table 17. Number and percentage distribution of women diagnosed with HIV infection by race/ethnicity and age at HIV diagnosis: Massachusetts<sup>1</sup>, 2012–2014<sup>2</sup>**

	White NH		Black NH		Hispanic/Latina	
<b>Age (years):</b>	<b>N</b>	<b>%</b>	<b>N</b>	<b>%</b>	<b>N</b>	<b>%</b>
Under 13	1	1%	2	1%	0	0%
13 to 19	4	4%	9	3%	7	5%
20 to 24	14	15%	19	7%	7	5%
25 to 29	5	5%	31	12%	18	13%
30 to 34	16	17%	43	16%	16	12%
35 to 39	9	9%	27	10%	18	13%
40 to 44	7	7%	25	9%	20	15%
45 to 49	17	18%	38	14%	13	10%
50 to 54	12	13%	27	10%	14	10%
55 to 59	6	6%	20	7%	13	10%
60+	5	5%	28	10%	9	7%
<b>Total</b>	<b>96</b>	<b>100%</b>	<b>269</b>	<b>100%</b>	<b>135</b>	<b>100%</b>

<sup>1</sup> Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases for all years presented that were first diagnosed in another state before being reported in Massachusetts.

<sup>2</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999.

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding); Data are current as of 3/1/16 and may be subject to change

**Table 18. Number and percentage distribution of people diagnosed with HIV infection by Health Service Region (HSR)<sup>1</sup> and sex at birth: Massachusetts<sup>2</sup>, 2012–2014<sup>3</sup>**

Health Service Region:	Men		Women		Total
	N	%	N	%	N
Boston HSR	487	80%	119	20%	<b>606</b>
Central HSR	102	70%	44	30%	<b>146</b>
Metro West HSR	236	76%	74	24%	<b>310</b>
Northeast HSR	259	66%	133	34%	<b>392</b>
Southeast HSR	235	77%	72	23%	<b>307</b>
Western HSR	170	71%	71	29%	<b>241</b>
Prisons <sup>4</sup>	9	82%	2	18%	<b>11</b>
<b>Mass. Total<sup>5</sup></b>	<b>1,510</b>	<b>74%</b>	<b>517</b>	<b>26%</b>	<b>2,027</b>

<sup>1</sup> Reflects the health service region of a person's residence at the time of report (not necessarily current residence). See Epidemiologic Profile General Appendices, Health Service Region Maps, available at [http://www.mass.gov/dph/aids/research/profile2005/app5\\_hrs\\_maps.pdf](http://www.mass.gov/dph/aids/research/profile2005/app5_hrs_maps.pdf) for configuration of health service regions.

<sup>2</sup> Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases for all years presented that were first diagnosed in another state before being reported in Massachusetts.

<sup>3</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999

<sup>4</sup> HSRs are regions defined geographically to facilitate targeted health service planning. While prisons do not constitute an HSR, the prison population is presented separately in this analysis because of its unique service planning needs. Prisons include only persons who were diagnosed with HIV/AIDS while in a correctional facility. These data do not reflect current incarceration status.

<sup>5</sup> Total includes 14 people diagnosed with HIV infection with unknown HSR Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding). Data are current as of 3/1/16 and may be subject to change

**Table 19. Number and percentage distribution of people living with HIV infection on December 31, 2015 by Health Service Region (HSR)<sup>1</sup> and sex at birth: Massachusetts<sup>2</sup>**

Health Service Region	Men		Women		Total
	N	%	N	%	N
Boston HSR	4,879	76%	1,500	24%	<b>6,379</b>
Central HSR	1,067	62%	641	38%	<b>1,708</b>
Metro West HSR	2,155	72%	844	28%	<b>2,999</b>
Northeast HSR	2,171	66%	1,107	34%	<b>3,278</b>
Southeast HSR	1,973	70%	830	30%	<b>2,803</b>
Western HSR	1,406	64%	785	36%	<b>2,191</b>
Prison <sup>3</sup>	764	87%	115	13%	<b>879</b>
<b>Massachusetts Total<sup>4</sup></b>	<b>14,439</b>	<b>71%</b>	<b>5,833</b>	<b>29%</b>	<b>20,272</b>

<sup>1</sup> Reflects the health service region of a person's residence at the time of report (not necessarily current residence). See Epidemiologic Profile General Appendices, Health Service Region Maps, available at [http://www.mass.gov/dph/aids/research/profile2005/app5\\_hrs\\_maps.pdf](http://www.mass.gov/dph/aids/research/profile2005/app5_hrs_maps.pdf) for configuration of health service regions.

<sup>2</sup> Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases for all years presented that were first diagnosed in another state before being reported in Massachusetts.

<sup>3</sup> HSRs are regions defined geographically to facilitate targeted health service planning. While prisons do not constitute an HSR, the prison population is presented separately in this analysis because of its unique service planning needs. Prisons include only persons who were diagnosed with HIV/AIDS while in a correctional facility. These data do not reflect current incarceration status.

<sup>4</sup> Mass. total includes 35 persons living with HIV infection with unknown residence at time of report.

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding) , Data are current as of 3/1/16 and may be subject to change

**Table 20. Rank of the ten cities/towns<sup>1</sup> in Massachusetts<sup>2</sup> by the highest proportion of women among HIV infection diagnoses (HIV Dx): 2012–2014<sup>3</sup>**

Rank	City/Town	Number of HIV Dx among women	Percent of Total HIV Dx
1	Malden	15	48%
2	Lowell	34	43%
3	Lynn	21	42%
4	Everett	12	41%
5	Brockton	31	39%
6	Waltham	12	36%
7	Worcester	27	35%
8	Springfield	46	34%
9	Lawrence	21	33%
10	New Bedford	15	31%
	All others	283	20%
	Massachusetts Total	517	26%

<sup>1</sup> Among cities/towns with over 20 reported HIV infection diagnoses in the years 2012–2014. Note: reflects the city/town of a person's residence at the time of report (not necessarily current residence). People diagnosed while at a correctional facility are not included.

<sup>2</sup> Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases for all years presented that were first diagnosed in another state before being reported in Massachusetts.

<sup>3</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999. Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding); Data are current as of 3/1/16 and may be subject to change

**Technical Notes:**

Table 21 includes data from the Behavioral Risk Factor Surveillance System (BRFSS), a random-digit-dial telephone survey of Massachusetts residents through anonymous telephone interviews from 2013 to 2014. This ongoing survey covers a broad range of topic areas (including risk related to sexual activity) and is part of a CDC-funded national survey program. See <http://www.mass.gov/eohhs/gov/departments/dph/programs/admin/dmoa/health-survey/brfss/> for more information.

<b>Table 21. Number of women BRFSS respondents ages 18–64 years and percentage distribution by number of sexual partners in the past year<sup>1</sup>, Massachusetts, 2013–2014</b>				
	<b>0 Partners</b>	<b>1 Partner</b>	<b>2+ Partners</b>	<b>n<sup>2</sup></b>
<b>Total Women</b>	23.6 (20.3 – 27.0)	72.4 (68.7 – 76.2)	3.9 (1.5 – 6.4)	2,193
<b>Age in Years:</b>	<b>0 Partners</b>	<b>1 Partner</b>	<b>2+ Partners</b>	<b>n</b>
18–24	27.5 (11.7 – 43.3)	54.0 (35.7 – 72.3)	18.5 (2.7 – 34.3)	57
25–34	8.6 (1.6 – 15.7)	86.6 (78.6 – 94.6)	4.7 (0.4 – 9.0)	186
35–44	12.9 (7.6 – 18.2)	85.6 (80.2 – 91.0)	1.5 (0.2 – 2.8)	388
45–64	34.2 (30.3 – 38.1)	65.3 (61.3 – 69.2)	0.5 (0.0 – 1.1)	1,534
<b>Race/Ethnicity:</b>	<b>0 Partners</b>	<b>1 Partner</b>	<b>2+ Partners</b>	<b>n</b>
White (non-Hispanic)	22.8 (19.1 – 26.5)	72.9 (68.6 – 77.2)	4.3 (1.3 – 7.3)	1,747
Black (non-Hispanic)	35.0 (19.6 – 50.4)	64.3 (48.9 – 79.7)	0.7 (0.0 – 1.5)	150
Hispanic/Latino	26.1 (14.2 – 38.0)	71.8 (59.7 – 83.8)	2.2 (0.0 – 4.6)	190
<b>Sex of Partner<sup>4</sup>:</b>	<b>0 Partners</b>	<b>1 Partner</b>	<b>2+ Partners</b>	<b>n</b>
Same sex	Not Applicable	-- <sup>3</sup>	-- <sup>3</sup>	26
Opposite sex	Not Applicable	95.5 (92.5 – 98.5)	4.5 (1.5 – 7.5)	1,438
<sup>1</sup> "Number of sexual partners in past year" is a state-added question administered to a sub-sample of BRFSS respondents and represents the number of people a respondent reports having sex with. Sex was defined by the interviewer as including oral, vaginal, or anal sex.				
<sup>2</sup> Only respondents with known values are included in this table. Column sub-totals may not equal overall total due to missing values.				
<sup>3</sup> Unstable estimates with N < 50 or relative standard error >30% are suppressed				
<sup>4</sup> Only asked of adults reporting sex (including oral, vaginal, or anal sex) in the past year				
Data source: Massachusetts Behavioral Risk Factor Surveillance System (BRFSS) (percentages may not add up to 100% due to rounding), 2013–2014				

**Technical Notes:**

Tables 22–24 include data from the Massachusetts Youth Risk Behavior Survey (MYRBS) among students in randomly selected Massachusetts public high schools, and conducted every odd year from 1993 to 2013. This anonymous survey is administered by the Massachusetts Department of Elementary and Secondary Education in collaboration with the Centers for Disease Control and Prevention and focuses on risk behaviors that may affect the health and/or safety of high school students. See <http://www.doe.mass.edu/cnp/hprograms/yrbs/> for more information.

**Table 22. Percentage and total number of female respondents reporting sexual behaviors to the MYRBS: Massachusetts, 2013**

By Behavior:	Percent of total responding yes to specified question	n <sup>1</sup> (total number of respondents for each question)
Ever had sexual intercourse	36.5%	1,259
Sexual intercourse before age 13	1.9%	1,257
4 or more lifetime sexual intercourse partners	8.2%	1,254
Sexual intercourse in last 3 months	29.0%	1,255
Condom used at last intercourse <sup>2</sup>	50.8%	341
Alcohol/drugs used at last intercourse <sup>2</sup>	18.2%	349
Ever been, gotten someone pregnant	3.1%	1,307
Ever had sexual contact against their will	13.3%	1,317
<sup>1</sup> The number of respondents for each question varies because some survey participants do not provide an answer <sup>2</sup> Among women reporting sexual intercourse in the past three months Data Source: Massachusetts Department of Elementary and Secondary Education, (percentages may not add up to 100% due to rounding)		

**Table 23. Percentage and total number of Massachusetts Youth Risk Behavior Survey respondents reporting condom use at last sexual intercourse by year and sex at birth: Massachusetts, 1993–2013<sup>1</sup>**

Year	Young Men		Young Women		Total	
	%	Total n <sup>2</sup>	%	Total n <sup>2</sup>	%	Total n <sup>2</sup>
1993	57.4%	409	46.7%	462	51.8%	872
1995	59.9%	623	52.0%	626	55.9%	1,253
1997	64.2%	517	50.4%	559	57.0%	1,079
1999	62.6%	589	52.0%	639	57.2%	1,237
2001	61.6%	553	54.9%	582	58.1%	1,139
2003	60.3%	424	57.4%	496	57.4%	922
2005	71.6%	442	59.2%	542	65.0%	986
2007	63.2%	422	59.2%	505	61.1%	929
2009	65.7%	409	50.6%	437	57.5%	849
2011	64.5%	373	51.0%	387	57.7%	761
2013	65.2%	323	50.8%	341	57.6%	667

<sup>1</sup> A random sample of high schools is selected for participation each year; data presented do not represent cohorts followed over time

<sup>2</sup> Total N = total number of respondents by sex (unweighted). The number of respondents for each question varies from year to year

Data Source: Massachusetts Department of Elementary and Secondary Education, (percentages may not add up to 100% due to rounding)

**Table 24. Percentage and total number of Massachusetts Youth Risk Behavior Survey respondents reporting sexual intercourse (ever) by year and sex at birth: Massachusetts, 1993–2013<sup>1</sup>**

Year	Young Men		Young Women		Total	
	%	Total n <sup>2</sup>	%	Total n <sup>2</sup>	%	Total n <sup>2</sup>
1993	51.4%	1,326	46.0%	1,435	48.7%	2,763
1995	50.3%	1,870	42.8%	1,930	46.5%	3,806
1997	46.8%	1,800	42.4%	1,858	44.7%	3,664
1999	46.4%	1,922	41.8%	2,017	44.1%	3,954
2001	46.3%	1,886	42.3%	1,892	44.3%	3,786
2003	40.8%	1,581	41.1%	1,676	41.0%	3,261
2005	47.9%	1,512	42.9%	1,669	45.4%	3,185
2007	45.2%	1,344	43.7%	1,495	44.4%	2,844
2009	48.0%	1,225	44.6%	1,251	46.4%	2,480
2011	44.7%	1,228	39.4%	1,281	42.0%	2,513
2013	39.4%	1,251	36.5%	1,259	38.1%	2,516

<sup>1</sup> A random sample of high schools is selected for participation each year; data presented do not represent cohorts followed over time

<sup>2</sup> Total N = total number of respondents by sex (unweighted). The number of respondents for each question varies from year to year

Data Source: Massachusetts Department of Elementary and Secondary Education, (percentages may not add up to 100% due to rounding)



